IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A transmitting unit within a communications system where at least some part of the transmission is executed by ~~means of~~ radio waves and in cells, and where symbols are transmitted by ~~means of~~ Orthogonal Frequency Divisional Multiplexing, called OFDM-technology, between a transmitting unit and a receiving unit, at which the symbol transmission is executed over a transmission channel in blocks of binary digits and with a guard interval (GI) between the blocks, comprising:

a device configured to automatically adjust ~~control~~ the length of the guard interval (GI) with regard to the existing size of the cell in which the transmitting unit is located.

Claim 2 (Currently Amended): The transmitting unit as claimed in claim 1, wherein the device configured to automatically adjust ~~control~~ the length of the guard interval (GI) includes a guard interval adjustment unit including an adjustable guard interval parameter.

Claim 3 (Previously Presented): The transmitting unit as claimed in claim 2, wherein the guard interval parameter can be changed via handling/managing system SNMP.

Claim 4 (Previously Presented): The transmitting unit as claimed in claim 2, wherein the guard interval adjustment unit calculates a guard interval with regard to the size of the current cell.

Claim 5 (Currently Amended): The transmitting unit as claimed in claim 2, wherein

the guard interval ~~has been~~ is adjusted to the size of the cell in such a way that the length of the guard interval in nanoseconds is set to, in the main, six times the cell radius in meters, that is, for a cell with the radius 100 meters, the length of the guard interval is set to/at 600 nanoseconds.

Claim 6 (Previously Presented): The transmitting unit as claimed in claim 3, wherein

the guard interval adjustment unit also takes into consideration the impulse response of the transmission channel.

Claim 7 (Previously Presented): A receiving unit within a communications system as claimed in claim 1, wherein

the receiving unit is equipped with an adjustment module which adjusts the receiving unit according to the current guard interval in the cell.

Claim 8 (Previously Presented): The receiving unit as claimed in claim 7, wherein the adjustment is made through/by an operator.

Claim 9 (Previously Presented): The receiving unit as claimed in claim 7, wherein

at the adjustment, an algorithm is used including:

estimation of received guard interval.

Claim 10 (Previously Presented): The receiving unit as claimed in claim 9, wherein the estimation is made by calculating an estimate of the difference between received and expected block start point of time, called "coarse framing offset" δ_{int} according to the formula:

$$\hat{\delta}_{int} = \arg\min_{n} \left\{ \frac{1}{G} \sum_{l=0}^{G-1} \left| |y_{l,l+n}|^2 - |y_{i,l+n+N}|^2 \right| \right\}$$

where n=0, 1, 2,.., 2G + 2N -1 and G indicates the sample length at the guard interval and y_l indicates the received signal of the i:th OFDM-symbol in the time domain.

Claim 11 (Currently Amended): A method within a communications system where at least some part of the transmission is executed by ~~means of~~ radio waves and in cells, and where symbols are transmitted by ~~means of~~ Orthogonal Frequency Divisional Multiplexing, called OFDM-technology, between a transmitting unit and a receiving unit, at which the transmission of symbols is executed over a transmission channel in blocks of binary digits with a guard interval (GI) between the blocks, ~~where said~~ the method ~~comprises~~ comprising:

estimating channel characteristics, also including producing/finding the existing size of the cell;

estimating least possible guard interval length which gives rise to an intersymbol interference within acceptable limits;

automatically producing/finding a guard interval parameter by a guard interval adjustment unit based on the guard interval length; and

incorporating and using the guard interval parameter at transmission of symbols from the transmitter.

Claim 12 (Previously Presented): The method as claimed in claim 11, wherein the estimating of channel characteristics also includes producing/finding impulse response of the channel.

Claim 13 (Previously Presented): The method as claimed in claim 11, further comprising:

estimating received guard interval.

Claim 14 (Previously Presented): The method as claimed in claim 13, wherein the estimating is constituted by operator decided guard interval.

Claim 15 (Previously Presented): The method as claimed in claim 13, wherein the estimating is executed by calculating an estimate of the difference between received and expected block start point of time, called "coarse framing offset" δ_{int} according to the formula:

$$\hat{\delta}_{int} = \arg\min_{n} \left\{ \frac{1}{G} \sum_{l=0}^{G-1} \left| |y_{i,l+n}|^2 - |y_{i,l+n+N}|^2 \right| \right\}$$

where n=0, 1, 2,.., 2G + 2N -1 and G indicates the length of sample at the guard interval and y_l indicates the received signal of the i:th OFDM-symbol in the time domain.

Claim 16 (Currently Amended): A method within a communications system where at least some part of the transmission is executed by ~~means of~~ radio waves and in cells, and where symbols are transmitted by ~~means of~~ Orthogonal Frequency Divisional Multiplexing, called OFDM-technology, between a transmitting unit and a receiving unit, at which the

symbol transmission is executed over a transmission channel in blocks of binary digits with a guard interval (GI) between the blocks, the method comprising:

~~controlling~~ automatically adjusting the length of the guard interval (GI) with regard to the existing size of the cell in which the transmitting unit is located.

Claim 17 (Currently Amended): The method as claimed in ~~patent~~ claim 16, wherein the length of the guard interval (GI) in nanoseconds is set to/at, in the main, six times the cell radius in meters, that is, for a cell with the radius 100 meters, the length of the guard interval GI is set to/at 600 nanoseconds.

Claim 18 (Currently Amended): A communications system where at least some part of the transmission is executed by ~~means of~~ radio waves and in cells, and where symbols are transmitted by ~~means of~~ Orthogonal Frequency Divisional Multiplexing, called OFDM-technology, between a transmitting unit and a receiving unit, at which the symbol transmission is executed over a transmission channel in blocks of binary digits with a guard interval (GI) between the blocks, comprising:

a device configured to automatically adjust ~~control~~ the length of the guard interval (GI) with regard to the existing size of the cell in which the transmitting unit is located.